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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/764,409

01/23/2004

B. Mark Hirst

200311455-1

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07/28/2006

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EXAMINER

LAXTON, GARY L

ART UNIT

PAPER NUMBER

2838

DATE MAILED: 07/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/764,409	Applicant(s) HIRST, B. MARK	
	Examiner Gary L. Laxton	Art Unit 2838	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 and 40-52 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-38 and 40-52 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-38 and 43-52 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3, 5, 7, 9-18, 20, 22, 24-36, 41-45, 47, 49, 51 and 52 are rejected under 35 U.S.C. 102(b) as being anticipated by Suzuki et al (US 6,236,192).

Claims 1-3, 5, 7, 9-18, 20, 22, 24-36 and 41-42; Suzuki et al disclose a power converter; the power converter including a charge pump capacitor (e.g. C1, C2 or C3), the charge pump capacitor coupled to a two transistor totem-pole configuration (e.g. SW1, SW2) in the converter so as to drive a primary of an isolation transformer and wherein a parasitic diode is coupled across at least one transistor in the two transistor totem-pole configuration with opposite internal diodes (e.g. figure 3: 71a).

Claims 43-45, 47, 49, 51 and 52 means for converting from an AC voltage to a DC voltage (L_S , C_S , L_M , $D1$, $D2$, C_o , V_o , R_o), at least figure 10; the means for converting including a means for isolation (L_M), the means for isolation including a primary (C_S , L_S) and a secondary

(D1, D2); the means for converting being coupled so that, in operation, AC to DC voltage rectification does not occur on the primary of the means for isolation. Wherein the means for converting includes being coupled to a two transistor totem-pole configuration: and wherein a parasitic diode is coupled across at least one transistor in the two transistor totem-pole configuration (i.e. 71a).

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4, 6, 19, 21, 37, 38, 46 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al in view of Walsh et al (US 5,892,983).

Suzuki et al disclose the claimed invention in regards to claims 1, 34 and 43 supra, except for wherein the power converter is incorporated on a motherboard and except for wherein the DC power consuming device comprises at least one of a fax, printer, scanner, and copier.

Motherboards comprising power supplies to provide power to peripheral devices such as printers is very well known in the art as a method of providing power to the components in computer systems. Walsh et al, for example, teach a motherboard comprising a power supply and connected to a fax, printer, scanner, or copier in order to provide an electronic computer system with power management to provide power requirements to peripheral devices such as faxes, printers, scanners or copiers.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the power supply of Huang et al to be integrated on a motherboard and to provide power to a fax, printer, scanner or copier as taught by Walsh et al in order to supply power to the fax, printer, scanner, or copier from a computer system.

6. Claims 8, 23, 40 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al in view of Balakrishnan (US 6,813,168).

Suzuki et al disclose the claimed invention in regards to claims 1, 34 and 43 supra, except for wherein power converter includes an input pi filter.

Balakrishnan teaches that known power supply techniques employ input EMI filter circuits of varying complexity. The simplest form of input EMI filter is known as a pi filter and is used in low-power power supplies to reduce power supply cost (col. 1 lines 25-35).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the power supply of Huang et al to include a pi filter in order to reduce power supply cost as taught by Balakrishnan.

Conclusion

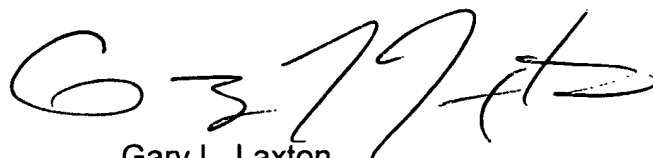
7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 6,670,842 Kamenicky discloses a voltage regulator circuit with totem pole connected MOSFETs with opposite connected parasitic diodes; US 6,600,145 Herz discloses an AC voltage switch with totem pole MOSFETs with opposite connected parasitic diodes; US Brulhart et al disclose a bidirectional switch circuit with two transistors with opposite connected parasitic diodes; US 5,239,255 Schanin et al disclose two transistors with opposite connected parasitic diodes; US 5,004,969 Schanin et al disclose two transistors with opposite connected parasitic diodes; US 4,727,308 Huljak et al disclose a FET power converter with two transistors with opposite connected parasitic diodes.

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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary L. Laxton whose telephone number is (571) 272-2079. The examiner can normally be reached on Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Karl Easthom can be reached on (571) 272-1989. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'G. Laxton', is positioned above the printed name and title.

Gary L. Laxton
Primary Examiner
Art Unit 2838

7/19/2006